REMARKS

The above amendments and these remarks are responsive to the non-final Office Action issued on July 18, 2006. By this Response, claims 29, 62 and 68 are amended. Claims 1-28, 41-61, 63-67 and 69-74 are cancelled without prejudice. No new matter is added. Claims 29-40, 62 and 68 are now active for examination.

The Office Action rejected claims 29-40, 62, 68 and 72-74 under 35 U.S.C. § 101. Claims 29-40, 62, 68 and 72-74 were rejected under 35 U.S.C. §103(a) as being unpatentable over Bradford (US Patent, 6,954,750) in view of Dailey et al. (6,917,952).

The Examiner is thanked for the courtesy for a telephone interview on October 24, 2006 to discuss a proposed amendment to claim 29 and reasons on why the proposed claim 29 is directed to patentable subject matter. Notably, the proposed claim 29 incorporates descriptions closely track claims of U.S. Patent No. 6,751,621, the parent of the instant application, which the Examiner already determined to be patentable.

After considering the proposal, the Examiner indicated that the proposed amendment appears to be in appropriate form, but suggested that the §101 rejection would be effectively addressed if further limitation related to providing a result of the clustering step is added to the claims.

By this Response, all the independent claims are amended in a way similar to the proposed amendment to claim 29, and further incorporate the Examiner suggestion by adding descriptions related to providing access to a clustering result. Appropriate support for the amendment can be found in, for instance, Figure 7 and Page 33, line 12 of the written description.

Applicants respectfully submit that the rejections are overcome in view of the claim amendment and/or remarks presented herein.

The Rejection under 35 U.S.C. §101 Is overcome

Claims 29-40, 62, 68 and 72-74 were rejected under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter. The rejection is overcome.

By this Response, all the independent claims are amended. It is submitted that the claims are not directed solely to mere ideas, laws of nature, or natural phenomena. Each of the claims falls squarely into one of the classes of subject matter permitted by 35 U.S.C. § 101, that is to say process or machine, respectively. Independent claim 29 and 2 for example, are tied to machine-executed steps or a data processing system (machine). Independent claim 68 recites a tangible machine-readable medium, in conformity with ***In re Beauregard,*** 53 F.3d 1583, 35 USPQ2d 1383 (Fed. Cir. 1995). According to the Beauregard decision, computer programs embodied in a tangible medium, such as floppy diskettes, are patentable subject matter under 35 U.S.C. §101.

Also, as amended, each of the independent claims describes efficiently clustering data points from a dataset, such as documents, to identify similarities between groups of data points within the dataset. The described steps specify unique steps for constructing a semantic representation (trainable semantic vector) for each data point, and cluster or group the data points to identify similarities between the data points according to the trainable semantic vectors. The clustering result is provided. The process and system are not mere abstract concept or mathematical formula. Rather, the process and system provide useful applications. It is respectfully submitted that generating trainable semantic vectors for data points and clustering/grouping the data points based on the generated trainable semantic vectors allow efficient grouping of data, which improves a machine's efficiency in identifying or retrieving data. Furthermore, the clustering process help identify similarities between groups of data points within the dataset. Accordingly, the claims describe concepts that create a "useful, concrete and

tangible result" **analogous** to the transformation of discrete dollar amounts into a final share price, which the Federal Circuit found to be a sufficiently "useful, concrete and tangible result" in ***State St. Bank & Trust Co. v. Signature Fin. Group, Inc.***, 149 F.3d 1368, 47 USPQ2d 1596 (Fed. Cir. 1998) by applying mathematical conversions to transforming data. Furthermore, constructing a semantic representation (trainable semantic vector) for each data point, and clustering or grouping the data points to identify similarities between the data points according to the trainable semantic vectors produce a "useful, non-abstract result" **analogous** to the method of adding a data field with information on long distance providers, which the Federal Circuit found to be a "useful, non-abstract result that facilitates *differential* billing of long-distance calls," which "fall[s] comfortably within the broad scope of patentable subject matter under §101." ***AT&T Corp. v. Excel Communications, Inc.***, 172 F.3d 1352, 50 USPQ2d 1447 (Fed. Cir. 1999).

Additionally, the issuance of Bradford (U.S. Patent No. 6,954,750) and Dailey (U.S. Patent No. 6,917,952) patents, both of which describe data clustering and were cited in the Office Action, confirms that the USPTO has long considered that the technologies as claimed in the instant application are directed to patentable subject matter.

The Rejection under 35 U.S.C. §103(a) Is Overcome

Claims 29-40, 62, 68 and 72-74 were rejected under 35 U.S.C. §103(a) as being unpatentable over Bradford (US Patent, 6,954,750) in view of Dailey et al. (6,917,952). The obviousness rejection is respectfully overcome because neither Bradford nor Dailey is an effective reference.

The instant application is a divisional of U.S. patent application No. 09/562,916, filed on May 2, 2000 and now issued as U.S. Patent No. 6,751,621, which claims priority from U.S.

provisional application No. 60/177,654, filed on January 27, 2000. Accordingly, the instant application enjoys the effective filing dates of May 2, 2000 and January 27, 2000.

On the other hand, the earliest priority date of Bradford is October 10, 2000, and the purportedly earliest priority date of Dailey is May 26, 2006, both later than May 2, 2000 and January 27, 2000, the effective filing dates of the instant application. Accordingly, neither Bradford nor Dailey is an effective reference under 35 U.S.C. §103(a) and hence cannot support a prima facie case of obviousness. It is respectfully submitted that all the pending claims are in condition for allowance. Favorable reconsideration is respectfully requested.

For the reasons given above, Applicants believe that this application is in condition for allowance, and Applicants request that the Examiner give the application favorable reconsideration and permit it to issue as a patent. However, if the Examiner believes that the application can be put in even better condition for allowance, the Examiner is invited to contact Applicants' representative listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to **Deposit Account 500417** and please credit any excess fees to such deposit account.

Respectfully submitted,

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